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Fireproof Buildings of NATCO HOLLOW TILE

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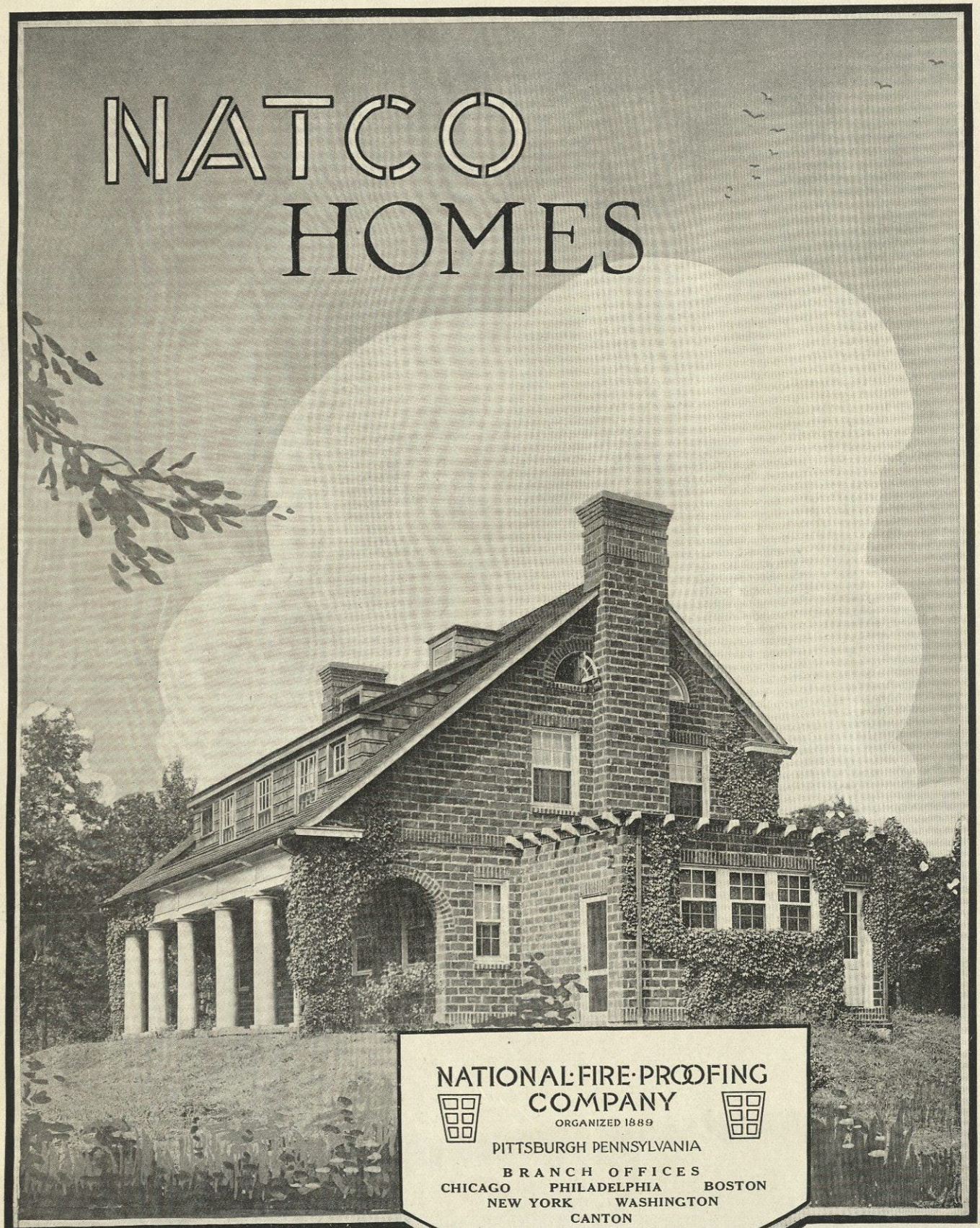
NATCO HOMES



NATIONAL FIRE-PROOFING COMPANY

ORGANIZED 1889

PITTSBURGH PENNSYLVANIA

BRANCH OFFICES

CHICAGO PHILADELPHIA BOSTON

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CANTON

THE HOME

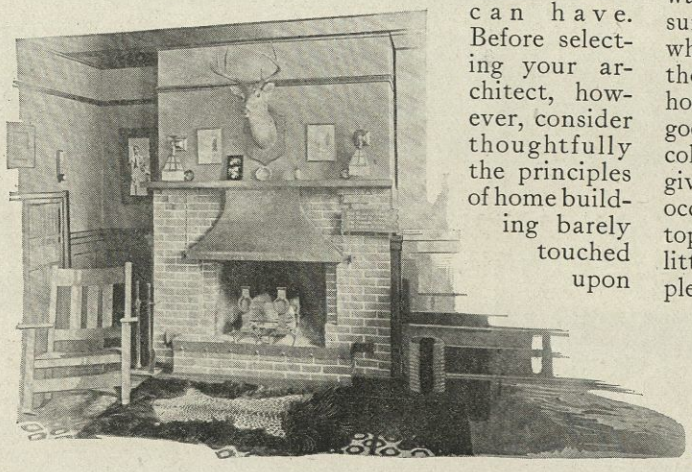
THE first feeling of true civic responsibility comes of having one's own home. The thoughtful people of the country are awakening to this, and from the tendency of a few years ago to sell or mortgage the home to buy an automobile, our people are thoughtfully planning first the home, surrounded by ground enough to accommodate an automobile and a garage later.

But to fulfill its mission of forming the family unit, thus bettering the Nation, the home must be more than a house. It must be attractive in all that the name applies. Beauty is as utilitarian as are conveniences. Resourceful business men already realize this, particularly employers of large numbers of workmen. They find that it pays to make both the homes and the working surroundings of their employees pleasant and cheerful as well as convenient and sanitary. For the happier and more contented a man is, the more cheerfully will he go about his work—and more and better work will he do.

Then, too, since home is the woman's workshop where most of her life is spent, why should it not be the most pleasant spot on earth? In the first place, build it right, then surround it with gardens instead of hard pavements or bare earth; flowers instead of ash heaps and empty tin cans; hedges instead of tumble-down and patched-up wooden fences; vine covered arbors, velvety lawns instead of a rank growth of weeds or rubbish piles and it will be a home, rather than a mere dwelling.

BUILD FOR CONTENTMENT

The home should indicate above everything else, the character of those who dwell within its walls. To the stranger or the approaching guest, the house should express in its exterior design, the warmth of the owner's hospitality. Too often, however, the formal exterior gives one the impression that cordiality will be lacking. Such buildings may be so very bleak and bare, and so devoid of proper outline and proportion, that they are little more than roofed-over boxes. They often cost as much or more, than artistic houses, yet lack the attractive features of a home. This is the secret of real home building. Money alone, without taste and experience, will not produce satisfying results. Therefore, to pay a small percentage of the original cost of the home for the services of a competent architect affords the best assurance of a sound investment that a home-builder can have. Before selecting your architect, however, consider thoughtfully the principles of home building barely touched upon here, and take this book with you when you go to engage him. He will appreciate helpful suggestions to be derived from it.



The building and furnishing of a home is a pleasure which usually falls to one's lot but once in a lifetime. One is fortunate indeed, if as a result of his effort, he has in his finished home a lasting comfort and a good investment. On the other hand, it may prove to be not only a poor investment, but a disappointment. This obviously will depend upon the intelligent suggestions that one may or may not have had before beginning to build. It is to supply a possible lack of such information that this book has been prepared and in it the essential features of home building are pointed out as briefly as possible.

A well proportioned house, with rough exterior wall surface and showing no "fancy work" is surely the ideal home. Outline is the first feature which catches the eye. Harmony of outline with the location, is of prime importance in designing a house. Symmetrical outline, however, depends upon good proportion. For instance, the diameter of columns must be proportionate to their length. To give a pleasing effect to the facade, windows must occupy a proper amount of the wall space; a chimney top too large or too small, or projecting too far or too little above the roof, may disfigure an otherwise pleasing outline.

BUILD FOR PERMANENCE

It is even more important, however, that the home be permanently constructed and have all the latest conveniences. No home that is not

permanent is worthy of the name. A home should be built to shelter not only one generation but a whole line and permanence is the prime requisite of such a structure.

Wood is not an ideal material for a home. Solid masonry walls are, as a rule, of pleasing proportions, but for home building they are fast giving way to more suitable materials. Solid masonry walls of stone or other materials rarely become thoroughly dry in the center and buildings having such walls are usually damp when artificial heat has been withdrawn.

Bricks possess many qualities which are ideal. In common with all fired-clay products, they are fireproof in the highest degree. They are easily obtained in most localities. Their limitations, as to size, economy and architectural effect, however, are surely apparent to every careful student of home building. Furthermore, a house built with solid brick walls is not damp proof, unless a special furring of hollow tile or other material is used on the inside to keep moisture from penetrating the walls, wetting the plaster and thus destroying the paper, fresco, tapestries or other wall coverings.

Permanence, then, must be the ideal and permanence cannot be had with iron which will rust, or wood which will burn or decay. The permanent wall must be of masonry, and the modern trend is overwhelmingly towards walls of Hollow Tile construction, not only for permanence, but also for safety, economy and a sound investment.

It is hoped, of course, that a long life of contentment will follow the occupation of the new home. But man proposes and God disposes. A little wobble in the wheel of Fate might make it necessary to rent or dispose of the home at any time, or a chance to invest in a promising business make it advisable to borrow money on the home. Just here a NATCO building is superior to a frame building of any kind, whatever its outside finish. The owner can sell, rent or mortgage to better advantage when he needs the best possible return from his investment.

ECONOMY AND SAFETY

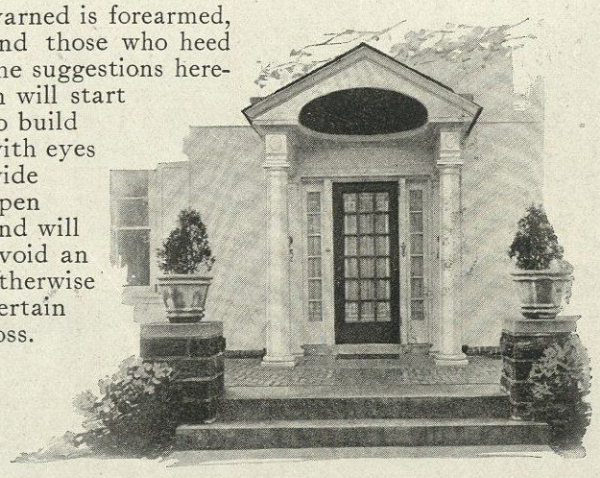
That there may be no misunderstanding, the costs of building should be examined and compared in detail. Like the automobile, the cost is not wholly represented by the purchase price. The question is, what will be the cost of upkeep? It profits nothing to build a cheap house, if repairs and operating expenses are to exceed the cost of a good house within the first ten years. The difference in cost between a frame building of any kind and one from the same design built of NATCO XXX Hollow Tile, or NATCO TEX-TILE is so small that during the first few years it will be more than offset by the saving in fuel, paint, repair and insurance bills.

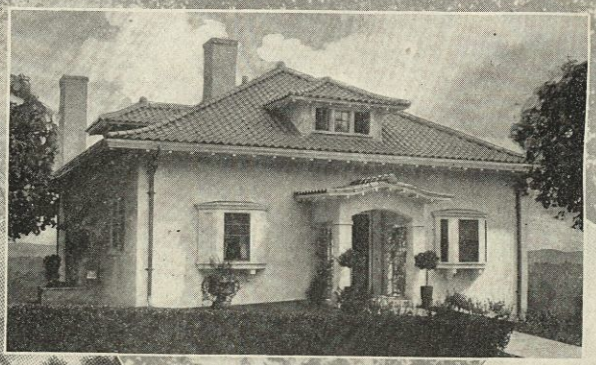
The economy of NATCO Hollow Tile lies not only in the low up-keep, but in the cost of operation. Owing to the dead-air spaces between the outer and inner surfaces of the wall, a house built of NATCO Hollow Tile is estimated by the best heating engineers to be heated to 70 degrees Fahrenheit in zero weather with 10% less coal than the same house of different material. It will save ice during the summer time. Lack of depreciation in value will more than equal the difference in first cost.

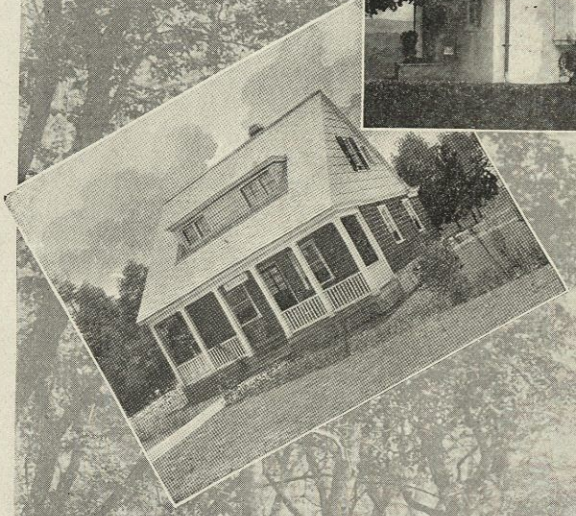
Back of all this stands the comfort of living in a home that is warm in winter, of entertaining friends in a home that is cool in summer and of occupying an artistic well-built home that you are proud of at all times.

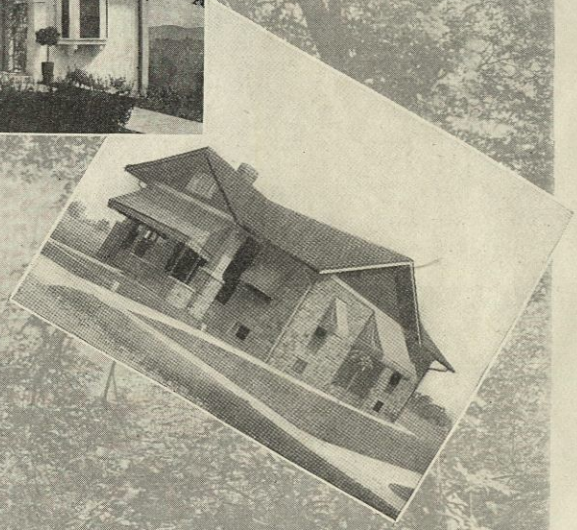
You should build for safety. A man has no right to risk his life needlessly. It belongs not to him, but to his family, his fellow citizens and his country. But even if he had the right to risk his own life, has he the same right to jeopardize the lives of his family by exposing them to a needless fire risk? Is it good business to expend money for a home that is not only unsafe but constantly diminishing in value? Obviously not. Even though the family escapes and insurance repays the nominal cost of repairing and refurnishing, no amount of money can replace the sentimental value of the lost family treasures descended from father to son, from mother to daughter.

Why should anyone building a home assume the burden of repairs, coal bills, depreciation, risk and worry, when at less cost for a period of years he can rid himself of this burden? There can be only one reason. He has not been properly informed about building matters before giving his order to the architect. Forewarned is forearmed, and those who heed the suggestions herein will start to build with eyes wide open and will avoid an otherwise certain loss.

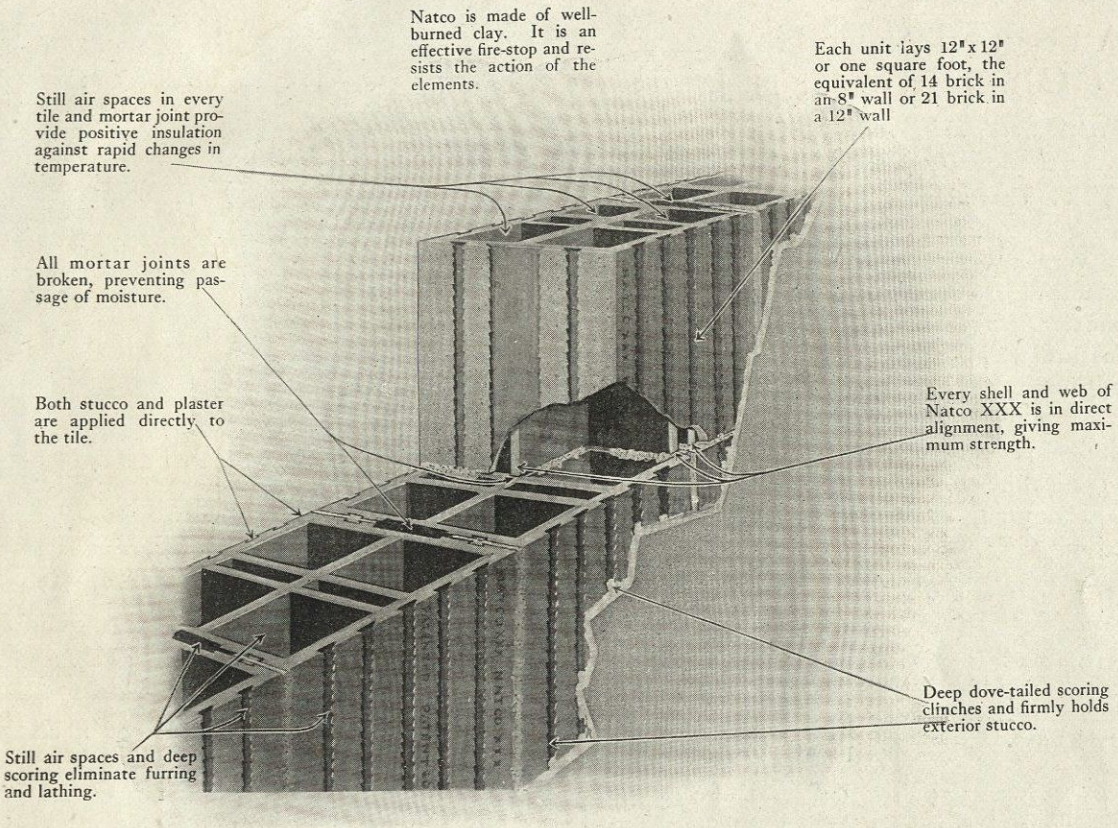








If you are planning a home, your best interests demand that you build of Natco Hollow Tile. A Natco home is fireproof—no conflagration can affect it. Because of its chambers of dry air, it is both damp proof and sound proof. It costs no more than one built of brick-and-wood, stone-and-wood or concrete and lends itself to the best architectural treatment. A Natco home is uniformly beautiful. The maintenance cost is practically nil. Leading architects advocate and specify Natco Hollow Tile for residences and all moderate size buildings, not only for their clients, but also for their own occupancy. Investigate Natco Hollow Tile *before*, not *after* you build.


Natco is made of well-burned clay. It is an effective fire-stop and resists the action of the elements.
Each unit lays 12" x 12" or one square foot, the equivalent of 14 brick in an 8" wall or 21 brick in a 12" wall
Still air spaces in every tile and mortar joint provide positive insulation against rapid changes in temperature.
All mortar joints are broken, preventing passage of moisture.
Both stucco and plaster are applied directly to the tile.
Every shell and web of Natco XXX is in direct alignment, giving maximum strength.
Deep dove-tailed scoring clinches and firmly holds exterior stucco.
Still air spaces and deep scoring eliminate furring and lathing.

Natco XXX Wall Construction

Out of the same grade of material that gives to skyscrapers really fire-safe construction has been perfected a heavy duty NATCO Hollow Tile representing the utmost, so far, in structural tile solidity and strength. Manufactured in larger units than brick, no other building material embodies possibilities for so wide a variety of surface treatments as hollow tile. NATCO wall tile is manufactured in several styles. NATCO XXX is a large unit in various thicknesses, laying up one square foot of wall surface and heavily scored all around to hold mortar, interior plaster and an exterior finish of Portland cement stucco applied directly to the surface of the tile.

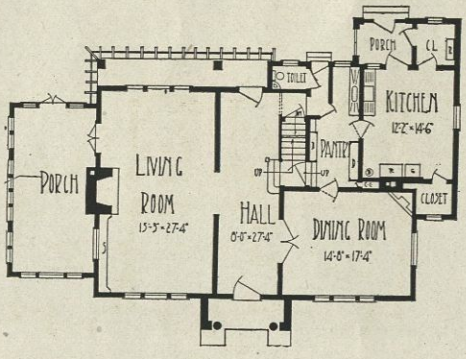
NATCO TEX-TILE is a slightly smaller and more flexible unit, manufactured with a five by twelve inch rough-texture face, in mixed shades of brown and red, and is well glazed all 'round. It is safe to say that no building material makes so desirable a house embodying as it does possibilities for so wide a range of surface treatment, dark reds and browns of NATCO TEX-TILE combined with white, black or cream-colored mortar joints and all the shades and finishes of cement stucco. Several buildings erected from the same plan can be made to look like a variety of designs by giving them different combinations of exterior surface treatment.

Every unit of NATCO Hollow Tile is imprinted with the trademark "NATCO". This is for your protection in identifying a material that has been successfully used in all types of buildings from skyscrapers down to bungalows. Insist upon the genuine.

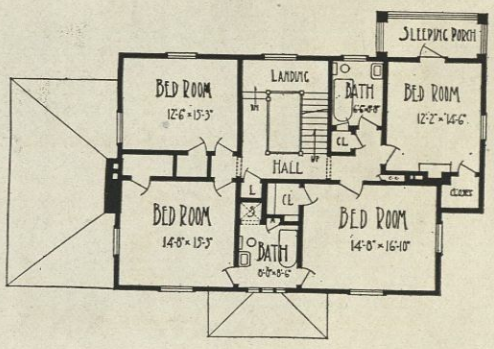
A Beautiful Natco Home at Glenn Ridge, N. J.

Frank Goodwillie, New York City, Architect.

THE charming contrast which stucco makes with a brick trim is very effectively shown in this beautiful residence. The latticed shutters of the second story are a feature which adds greatly to the appearance of the stucco residence. This house is extremely simple in design, yet makes an attractive and practical home.



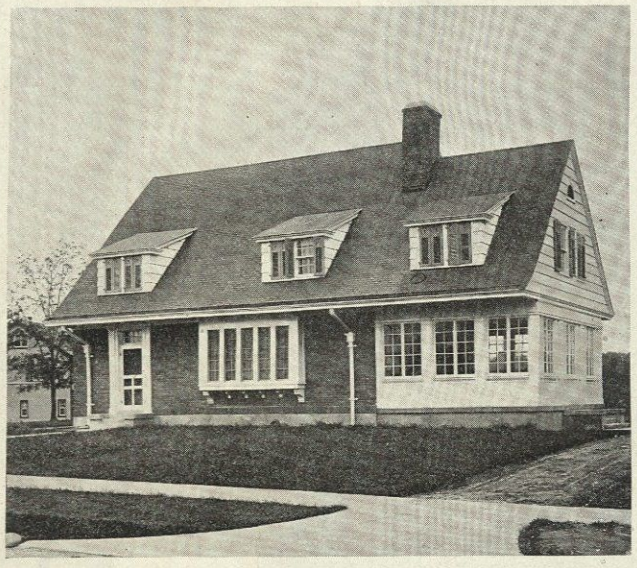
First Floor



Second Floor

NATCO XXX Hollow Tile is not finished on the outer surface, but bears on four sides a surface deeply dove-tailed scored to receive a plaster treatment both inside and out. A Portland cement plaster or stucco in any one of the various finishes known as "sand finish," "stippled sand finish," "rough cast," and "pebble dash" is applied to the exterior wall surface and ordinary plaster directly to the inside of the tile walls without lathing or furring of any kind. Perhaps no exterior finish, except Tex-Tile, makes so beautiful a home as pebble dash. Next to this comes rough cast, then stippled sand finish. It is characteristic of these finishes that they mellow with age, the shadows taking on a deeper tone while the high lights remain about the same. No other finish, perhaps, blends so perfectly with the background; no other finish presents such a soft tone free from disquieting "patterns." No other treatment has been so long in use except perhaps brick and stone. Some of the most artistic buildings in Europe owe much of their beauty to the judicious use of stucco finish.

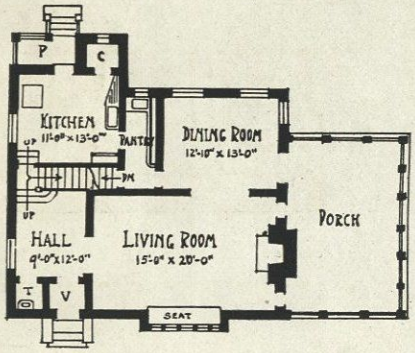
The home builder must not confuse pebble dash or stucco finish on NATCO Hollow Tile with the imitation used on cheap tenement work and other temporary structures built to sell immediately to some innocent homeseeker. Such imitations are spread thin on lath, either metal or wooden, nailed to wooden studding. While presenting a face of apparent solidity and indestructibility, they are in reality the flimsiest of shams. The only stucco finish worth a moment's thought is stucco on a masonry background, preferably NATCO Hollow Tile which has a "key" ready made to clinch the stucco.



A Home of Brick and Natco Hollow Tile

Standard Buildings, Inc., New York City, Architects

WHILE stucco is the more common treatment for the exterior of Natco Hollow Tile Walls, brick may be used as a veneer at a saving in the expense of construction over solid brick. The wall which results is as durable in every way. The air spaces in the hollow tile are an effective insulation against dampness and rapid changes in temperature—a distinct advantage over ordinary brick construction.



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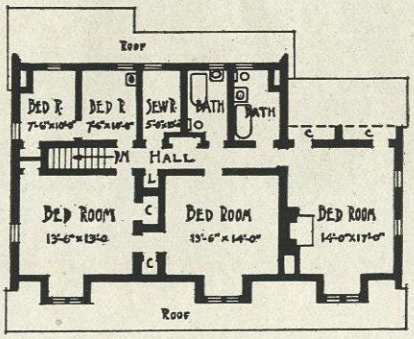
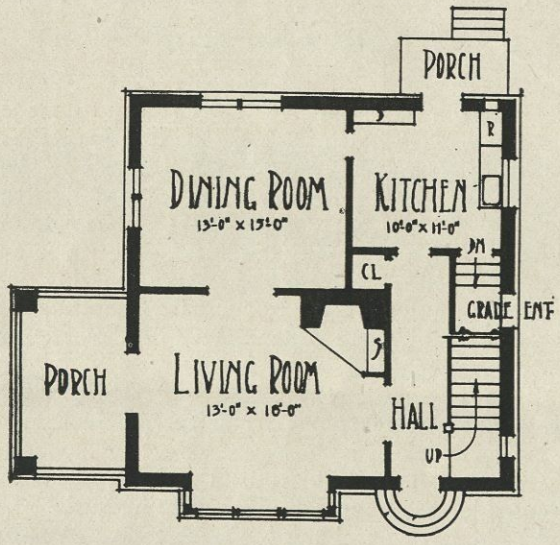


Second Floor

A surface treatment for NATCO Hollow Tile, adopted universally and with good effect on all kinds and sizes of buildings, is the facing of exterior walls with one course of brickwork. This treatment must not be confused with solid brick wall construction. It is simply a veneer of bricks backed up by hollow tile, thereby eliminating all the drawbacks of a solid brick wall. In this form of construction it is the heavily scored hollow tile which gives strength, rigidity and solidity to the structure and keeps the house warm in winter, cool in summer and dry at all times. The floors and roof are carried by the NATCO Hollow Tile and even the brick veneer is tied to the tile wall for support, with galvanized iron anchors spaced 2 feet apart at every fifth course of bricks.

Walls laid up in this manner cost more than either Tex-Tile walls or walls of Hollow tile surfaced with stucco, but will prove entirely satisfactory to those who prefer a brick finish without the disadvantages of a solid brick wall and who are willing to pay the difference in cost. A Hollow Tile wall, faced with brick is far better construction in every way than solid brick walls and usually costs less. Again, some very pleasing effects can be had on any building designed to be stuccoed by working in quoins, sills, lintels, watertables and other details of Tex-Tile or brickwork. Such details are necessary parts of the building which in a stucco finish are treated the same as the rest of the wall surface. The use of Tex-Tile or brickwork, however, effects a harmonious contrast of great architectural beauty and can be recommended as one which gives pleasing variety to the already large number of surface treatments for Hollow Tile.

Richard H. Marr, Detroit, Michigan, Architect



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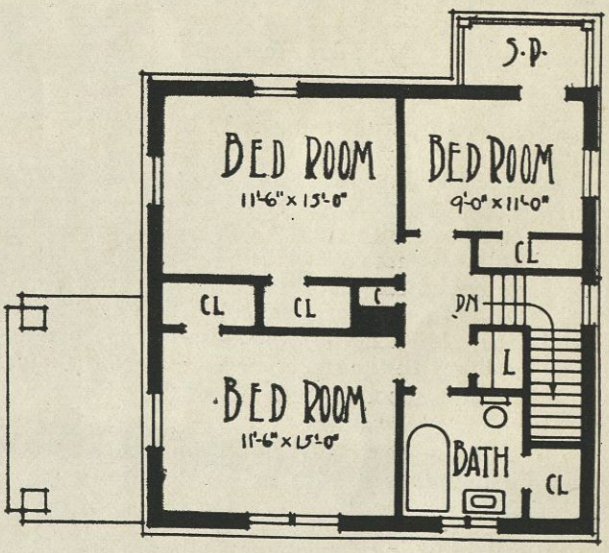
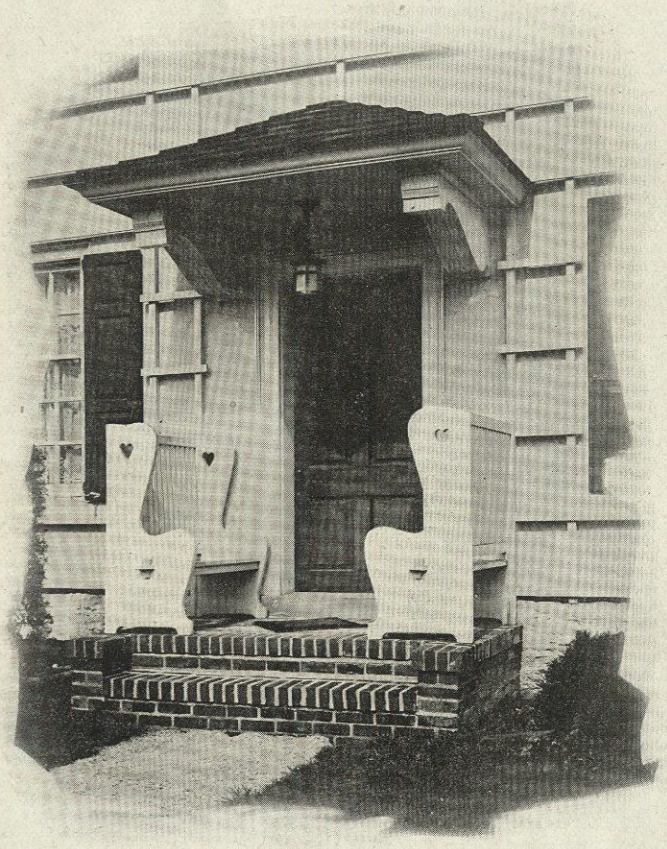


Second Floor

An Inviting Entrance

THERE is a sense of dignity and a warmth of hospitality in the charming entrance shown on this page which would add character and individuality to any home, no matter how elaborate. It is interesting in that it shows very effectively how Natco Hollow Tile fits in with any general architectural scheme.



A Home ~

That Should Appeal To Any Home Builder

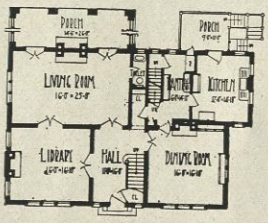
THERE is an air of old fashioned simplicity about the house shown on the opposite page which makes it particularly suitable for hollow tile construction. What would otherwise be a monotonous expanse of white stucco is agreeably relieved by the shutters on the second story, the flower boxes at the windows, the shingle roofs at the entrance and over the bay window, and the brick sills.

The exterior stucco finish was applied direct to the tile, as was the interior plaster, no furring or lathing being necessary. The interior, as can be easily seen by the floor plans, is very well arranged, and is just as inviting as the exterior. A home of this kind will stand, practically unimpaired, for generations.

An Attractive Home in Ben Avon, Pennsylvania

Private Plans

NATCO Hollow Tile was used throughout in the construction of this beautiful residence. The outside walls were constructed of eight inch Natco Hollow Tile. White stucco was used with a waterproofing paint. The floors of the first and second stories were constructed of combination hollow tile and reinforced concrete and the partitions throughout are of Natco Hollow Tile. The roof is of French Tile, green in color.



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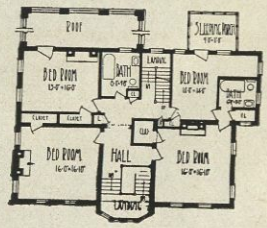
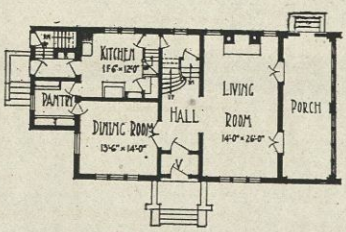


Second Floor

A Natco Residence at Kew Gardens, Long Island

Smith & Holler, New York City, Architects.

THIS residence is a striking example of the adaptability of Natco Hollow Tile for distinctive home building. A house of this type has all the advantages of solid masonry at a much lower cost. Its enclosed air spaces are always dry, neither moisture, heat nor cold can penetrate to the interior as is possible with walls of solid masonry. A stucco finish on Natco Hollow Tile gives you a beautiful, lasting exterior with all the comfort and security of a Natco home.



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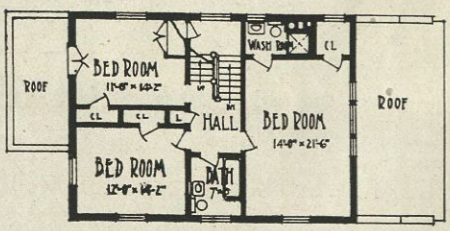
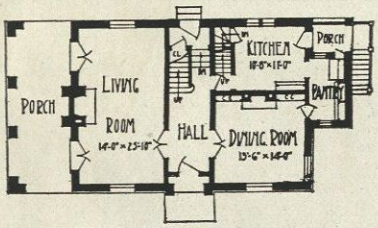


Second Floor

A Natco Home at Pittsburgh, Pennsylvania

Harry S. Bair, Pittsburgh, Architect.

THE home pictured at the right is of a style that lends itself well to Natco Hollow Tile Construction. The outside walls were constructed of twelve and eight inch Natco Hollow Tile, with both stucco and interior plaster applied directly to the tile walls without furring and lathing. The foundations are concrete and the floors of wood construction. White stucco was used with a water proofing paint. The roof is of red shingle tile.



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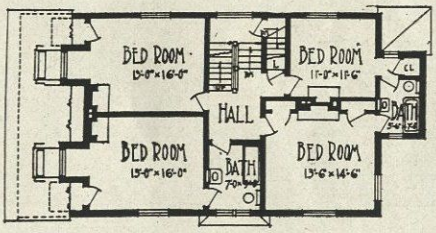
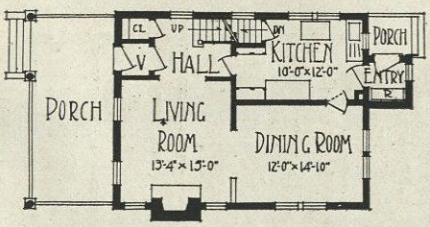


Second Floor

A Group of Typical Natco Textile Houses

J. A. Conner Company, Washington, D. C., Builders.

HOUSES of this pattern are especially adapted for narrow city lots. Being made of Natco Textile, they have all the color and texture of high quality face brick with the added advantage of having the hollow air-spaces within the tile to provide effectual insulation against moisture, heat and cold. With every unit of Textile laid, a section of completed wall is put in place, and the interior plaster is applied directly to the inside wall surface.



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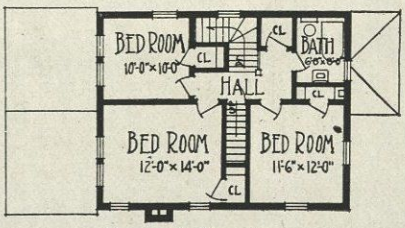

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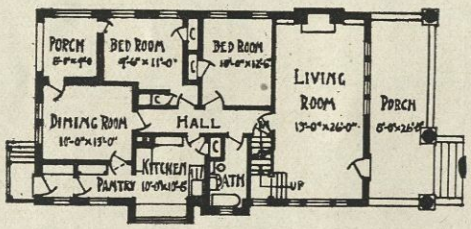


A Home that is Simple and Dignified

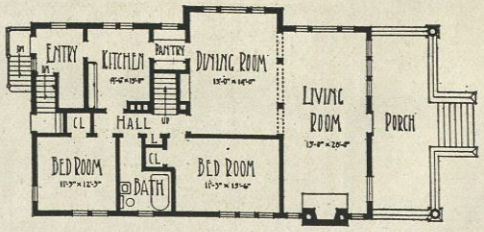
George W. Ashby, Chicago, Illinois, Architect.

THIS bungalow is pleasing in appearance due largely to the fact that it is simple and plain. It measures 27 by 48 feet. The foundations and exterior walls are constructed of 8 inch Natco Hollow Tile, while the floors and partitions are of wood construction. The plaster on the inside and the stucco on the outside were applied directly to the walls without furring or lathing of any kind. The cost of a Natco Bungalow is but slightly higher than all wood construction and this increased cost is more than offset in a few years by the very little expenditure required for upkeep.

Tex-Tile with Stone Trim A Pleasing Variety

Jud Yoho, Seattle, Washington, Architect.

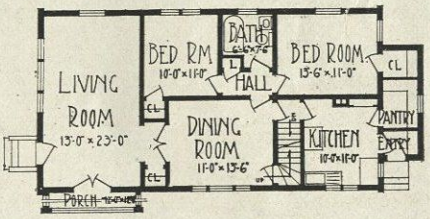
IN this charming and picturesque bungalow, one finds a solution of the problem of combining beauty and utility in a home. A bungalow of this type shows up to a greater advantage on a good sized plot and is eminently suited to a country or suburban location. Natco Tex-Tile was used for the walls, and its variety of color, texture and scale harmonizes very effectively with the general architectural scheme. The standard unit of Natco Tex-Tile is 8 inches thick with a finished face of approximately 5 by 12 inches. In that a tile of this size can be handled with one hand and takes the place of six ordinary bricks, the economy of its use is clearly apparent.

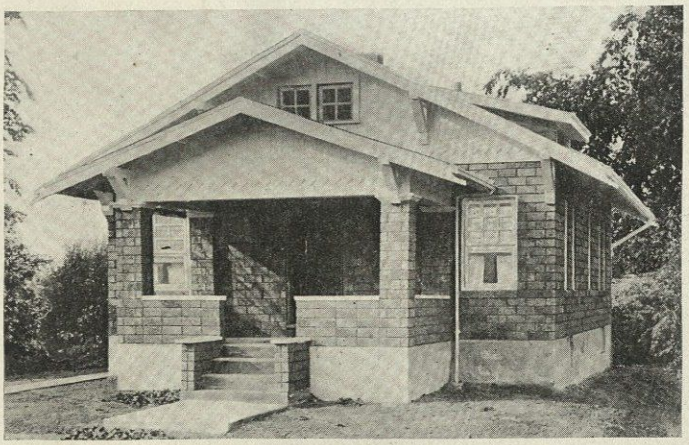


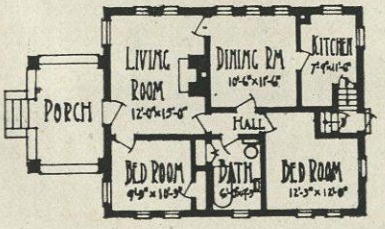
A Bungalow that is Comfortable and Permanent

Albert Baxter, Park Ridge, Illinois, Owner and Builder.

THIS bungalow is approximately 24 by 45 feet and is built of 6 inch Natco Hollow Tile with both interior plaster and exterior stucco applied direct to the tile walls. Such a bungalow is fire proof, has all the advantages of the solid brick wall at a considerable saving in expense, and, by the two air spaces it provides, the interior is thoroughly insulated from extremes of temperature existing without. Natural cement waterproof stucco was used and is giving excellent service. The roof is of red cedar shingles.







A Pleasing Natco Tex-Tile Bungalow

Charles R. Rowe, Dayton, Ohio, Owner.

THE construction is of 8 inch Natco Glazed Tex-Tile, laid in black mortar, with interior plaster applied directly to the tile walls. A bungalow built of Natco Tex-Tile represents the utmost in structural solidity and strength. It cannot burn. Neither can dampness, temperature, climate or age cause the slightest deterioration. It is warmer in winter and cooler in summer, because the hollow tile construction insulates the building with a blanket of dead air, and the material itself is practically non-conductive of heat or cold.

The Natco Garage

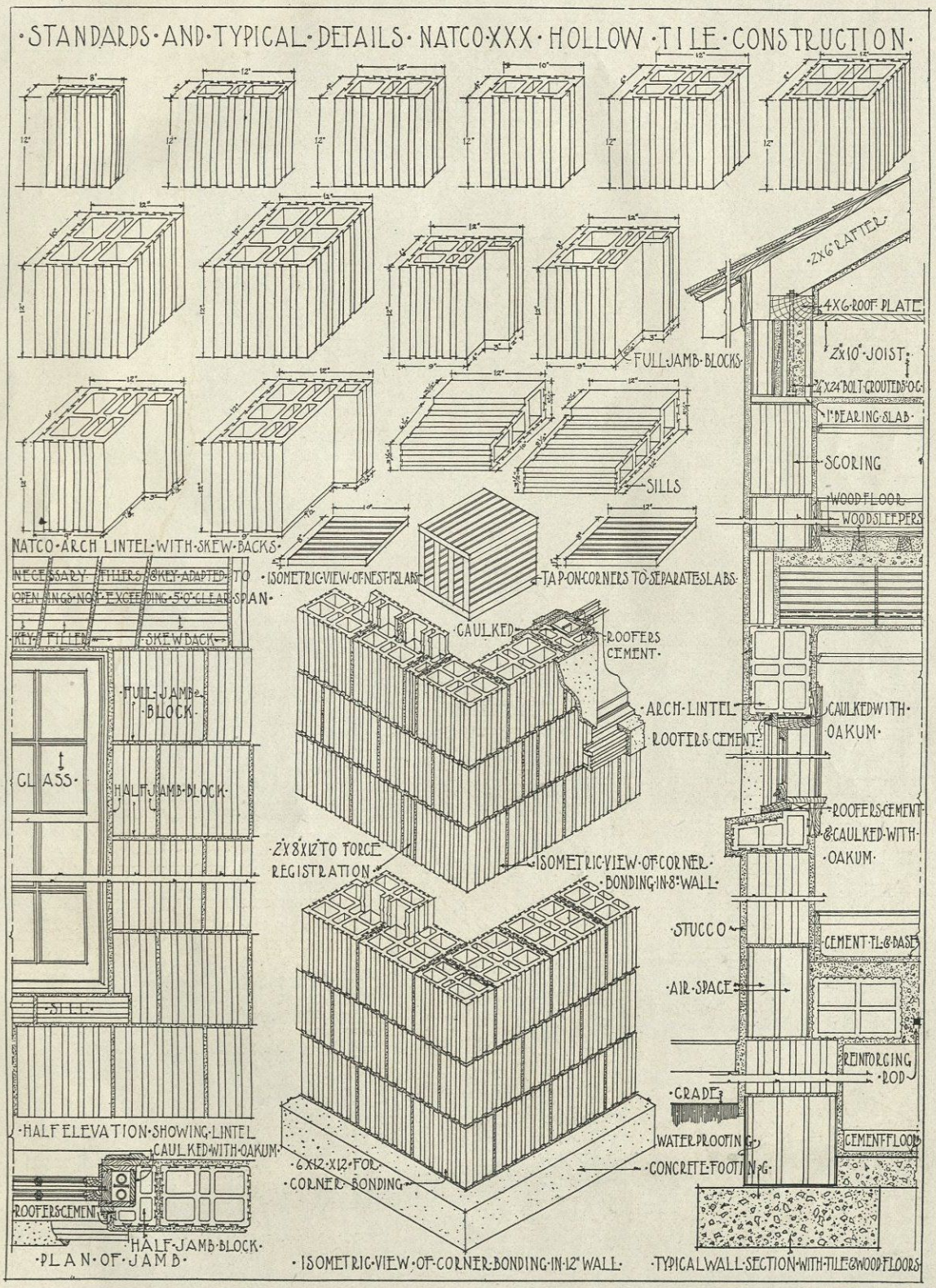
OF all building materials, Natco Hollow Tile has proved the most satisfactory for garage construction. It can be economically constructed, and is a permanent, attractive addition to the home with the possibility of future expenditures for repairs and replacements practically eliminated.

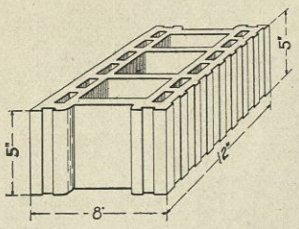
A Natco Hollow Tile Garage can be easily heated and on account of the air spaces afforded by the air cells of the tile, retains the heat and keeps out the cold to an extent impossible with other materials.

A Natco Hollow Tile Garage is truly fireproof. It enables you to make material savings in your insurance.

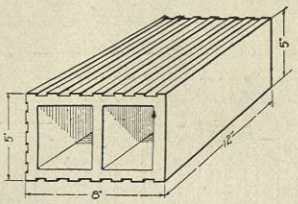
Because of the large size of the individual units of tile, a wall of Natco Hollow Tile is much more quickly erected than one of other materials, which enables you to cut down on your construction costs. That a poorly constructed garage is a bad investment, no matter how cheaply constructed, has been proved time and time again. A Natco Hollow Tile Garage is a profitable investment because it can be built to harmonize effectively with your home and surroundings and afford the utmost protection to your car.

A Few Typical Natco Garages

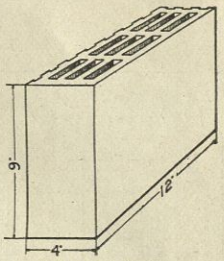

STANDARDS AND TYPICAL DETAILS NATCO XXX HOLLOW TILE CONSTRUCTION
FULL JAMB BLOCKS
SILLS
NATCO ARCH LINTEL WITH SKEW BACKS
NECESSARY FILLERS & KEY ADAPTED TO OPENINGS NOT EXCEEDING 5'-0" CLEAR SPAN
KEY FILLER
SKEW BACK
ISOMETRIC VIEW OF NEST 1'S LABS
TAP ON CORNERS TO SEPARATE SLABS
CAULKED
ROOFERS CEMENT
ARCH LINTEL
FULL JAMB BLOCK
GLASS
HALF JAMB BLOCK
SILL
2X8X12 TO FORCE REGISTRATION
ISOMETRIC VIEW OF CORNER BONDING IN 8" WALL
HALF ELEVATION SHOWING LINTEL CAULKED WITH OAKUM
ROOFERS CEMENT
HALF JAMB BLOCK
PLAN OF JAMB
6X12 X12 FOR CORNER BONDING
ISOMETRIC VIEW OF CORNER BONDING IN 12" WALL
2X6 RAFTER
4X6 ROOF PLATE
2X10 JOIST
4"X24" BOLT GROUTED O.C.
1" BEARING SLAB
SCORING
WOOD FLOOR
WOOD SLEEPERS
CAULKED WITH OAKUM
ROOFERS CEMENT & CAULKED WITH OAKUM
STUCCO
CEMENT FL & BASE
AIR SPACE
REINFORCING ROD
GRADE
WATER PROOFING
CONCRETE FOOTING
CEMENT FLOOR
TYPICAL WALL SECTION WITH TILE & WOOD FLOORS



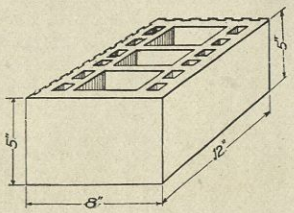
8″ Wall Tile



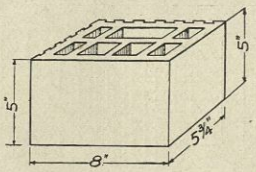
8″ Lintel



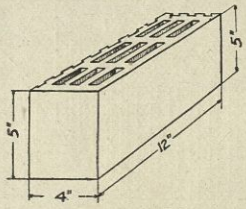
4″ Joint Filler



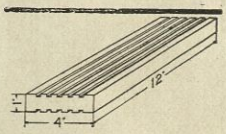
8″ Closure



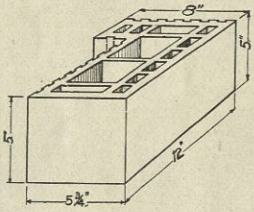
8″ Half Closure



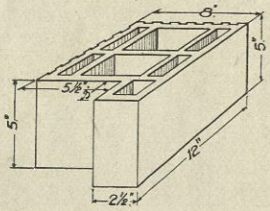
4″ Joist Closure



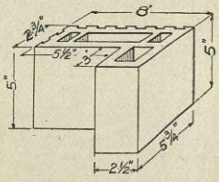
1″x4″ Joist Bearing Slab



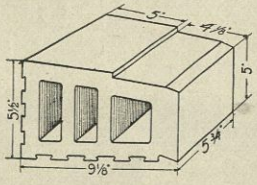
8″ Corner



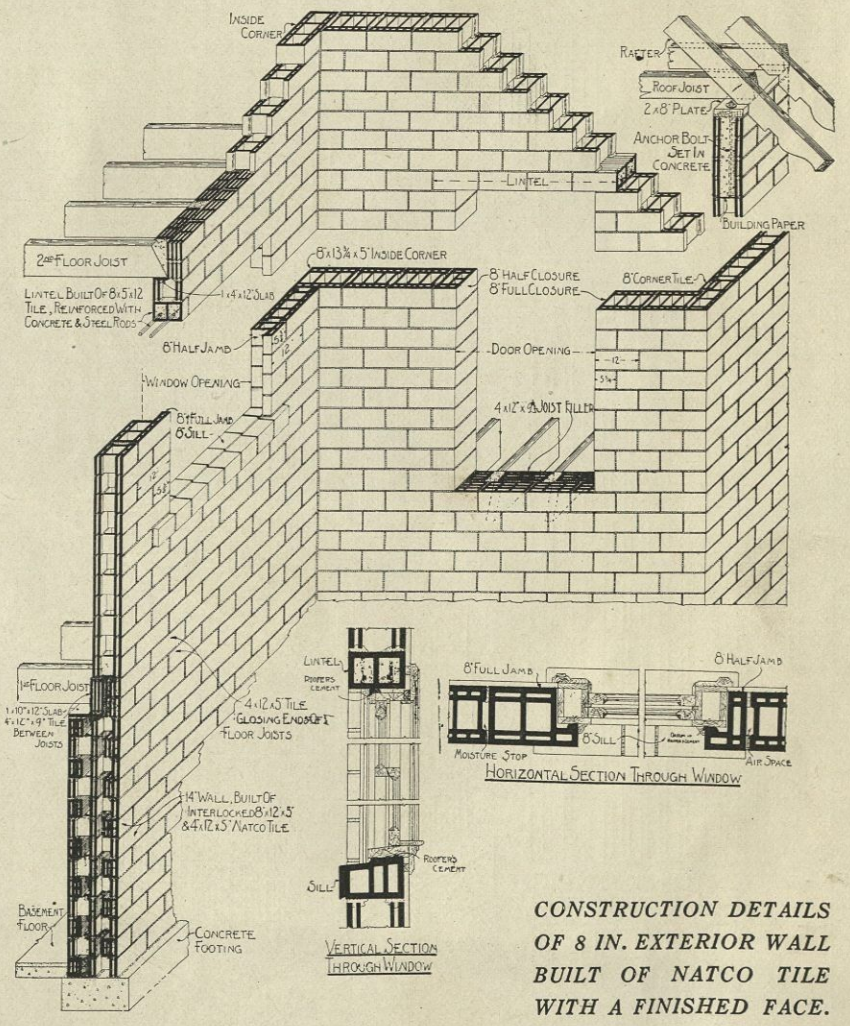
8″ Full Jamb



8″ Half Jamb



8″ Sill


INSIDE CORNER
RAFTER
ROOF JOIST
2 x 8" PLATE
ANCHOR BOLT SET IN CONCRETE
LINTEL
BUILDING PAPER
2nd FLOOR JOIST
LINTEL BUILT OF 8 x 5 x 12 TILE, REINFORCED WITH CONCRETE & STEEL RODS
1 x 4 x 12" SLAB
8" x 13¾" x 5" INSIDE CORNER
8" HALF CLOSURE
8" FULL CLOSURE
8" CORNER TILE
8" HALF JAMB
DOOR OPENING
WINDOW OPENING
4 x 12" x 4" JOIST FILLER
8" FULL JAMB
8" SILL
1st FLOOR JOIST
1 x 10" x 12" SLAB - 4 x 12" x 4" TILE BETWEEN JOISTS
4 x 12 x 5" TILE CLOSING ENDS OF FLOOR JOISTS
14" WALL, BUILT OF INTERLOCKED 8 x 12 x 5" & 4 x 12 x 5" NATCO TILE
BASEMENT FLOOR
CONCRETE FOOTING
LINTEL
ROOFERS CEMENT
SILL
VERTICAL SECTION THROUGH WINDOW
8" FULL JAMB
8" HALF JAMB
8" SILL
MOISTURE STOP
AIR SPACE
HORIZONTAL SECTION THROUGH WINDOW

CONSTRUCTION DETAILS OF 8 IN. EXTERIOR WALL BUILT OF NATCO TILE WITH A FINISHED FACE.

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